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OUR COMPLEX CIVILIZATION AND THE GENIUS OF ITS YOUTH

HARRY H. MOORE
Secretary, National Committee for Teaching Citizenship

I

Day by day it is becoming increasingly evident that the intelligence of man is not keeping pace with the growing complexity of modern society, and that fundamental change must be brought about in education if the decadence of civilization is to be prevented and social control achieved.

For fifty thousand years, more or less, man led a comparatively simple life. The community, if not the family, was economically independent. Each small group produced all necessary materials for food, clothing, warmth, and shelter. Division of labor only slightly developed. Then, only one hundred and fifty years ago, began the age of steam and electricity. Factories and mills were built; rapid communication and transportation drew the world together; the modern city sprang up. Specialization in production made each group dependent on various other groups. A strike among coal miners in the dead of winter came to imperil the lives of millions. When the board of directors of a corporation in one city decided to decrease its output, a machinist employed by another corporation three thousand miles away was thrown out of work, his wife was forced into industry, and his new-born babe died of malnutrition. The outstanding effect of the Industrial Revolution was to bring about unprecedented complexity of social and economic organization.

Now, at the end of the Great War, the world is in chaos. Humanity seems impotent before a prodigious array of political, social, and economic problems. Famine is abroad in the world. In a large part of Europe dangerous radicalism is in control. Europe is economically disintegrating for lack of goods; the United States has the materials and the labor for manufacturing these goods, but seems unable to make the domestic and international adjustments necessary to prevent depression and unemployment here and to save the lives of thousands abroad.

In the largest city of the United States, 20 per cent or more of the children are suffering from malnutrition, partly because their parents cannot afford to buy enough nourishing food. At the same time, fruit is allowed to rot in orchards and grain is unmarketed because of low prices. Nearly one-fifth of all children in the United States between ten and fifteen years of age are earning their living. Five and one-half millions of our people are illiterate, and a majority of our children are being produced by the less intelligent part of the population. Institutions for the feeble-minded are overflowing, though many of those who should be confined in them are at large spreading crime and disease. Two million children now in the schools of the country will die of tuberculosis if the present rate continues. And only three years after the close of the world's greatest war, which was fought, so we said, to end war, the nation is spending eight hundred million dollars per year in preparing for another conflict.

Such is the situation after one hundred and fifty years of industrial development, characterized largely by mechanical invention.

II

The impasse confronting society today may be due in part to a lack of morality and religion—to hatred and greed, to our unwillingness to practice the teachings of Jesus. But it is due also to a lack of intelligence. Our attitude toward our present problems is incredibly stupid. For physical sickness we require a physician with eight years of college and university training and with long clinical experience; for an engineering problem we demand skilled, highly trained, and high-salaried scientists; for war the world has mobilized its most brilliant chemists. But when a mayor or congressman is chosen, systematic training is not the chief requisite. Unfamiliar as we are with social science, we do not require scientific preparation on the part of those whom we select to deal with our political, economic, and social problems.

The politician of today understands law, and he knows politics; that is, he has become thoroughly familiar with the machinery of government. While such knowledge might have sufficed in the simple social organization of early American history, it is now inadequate. The revolution brought about by steam and the machine has made politics infinitely more complex; yet the rank and file of legislative, judicial, and administrative officers of today are trained only for the simple society which has passed.

For years it has been known by sociologists and psychologists that feeble-mindedness is closely allied with delinquency and crime, the social evil and pauperism. They have known that, by the segregation of all the feeble-minded of one generation, the constant and heavy expense due to these specific problems can be greatly reduced. But year after year legislators appropriate vast sums of money in punishment of crime and in relief of the poor, while they fail to recognize the significance of feeble-mindedness.

Dangerous radicalism should not be much more perplexing to the human mind than the problems young men are meeting successfully in the field of engineering. The testimony of many judicious observers, however, indicates that methods recently used by the federal government have tended toward the development of radicalism rather than toward its suppression.

Though it is doubtful whether there has been at all times in man's life upon earth sufficient food for everyone, in the United States today our storehouses are overflowing. There is enough food for all; and virtually all men are willing to labor for their share of it. Yet now with ten to fifteen million persons without sufficient food, clothing, and shelter to maintain themselves in a state of working efficiency, no serious attack is being made by any authoritative body on the problem of the distribution of wealth.

In the early days of human existence, small groups were unable to live peacefully in close proximity; clans became tribes, however, and tribes were welded together into nations. Today there are those politicians who say that the development of co-operative life can go no farther, that the nation must be supreme. In the opinion of many congressmen, the only way to preserve peace is to develop an unsurpassed fleet of ships and aircraft. So we pour our wealth into armaments—85 per cent of our national income, even now in times of peace.

In industry, the greater the task to be performed, the more useful the unconventional chemist or electrician becomes; but in economics, in sociology, and in domestic and international politics, we are sometimes afraid of genius. Occasionally a man in these fields applies the intellectual energies of a life-time to the solution of some specific problem; he acquires a knowledge regarding that problem surpassed by none; and then, when he proposes an unconventional measure, he is denounced as a dangerous citizen.

The failure of our lawmakers and administrative officers to deal wisely with social problems should not be charged against them. They cannot act more intelligently because they have not been adequately educated. In public schools and colleges, their interests and enthusiasms were directed largely to the study of mathematics, languages, and natural sciences, but not to the study of subjects which directly promote the intelligent handling of social problems.

Examinations of many hundreds of older high-school students reveal a deplorable lack of social knowledge.[1] Asked to indicate all of the social evils about which they have any information, they name, dancing, motion pictures, "joy riding," roller skating, and customs which may be of questionable propriety to some persons. To the minds of many of them, poverty does not exist. Most of them do not know what the words "sociology" and "economics" mean. It is true that they study civics, but in many schools civics deals only with the machinery of government. The problems for the solution of which the machinery exists are ignored. Courses in "current events" may be helpful, but they often consist largely in the exchange of unintelligent opinion. In college an increasing number of students are discovering the social sciences. But the vast majority never reach college. They leave high school and enter business or political life pitiably equipped to handle with understanding the problems which all citizens must inevitably face. If, occasionally, an individual achieves a position of wise leadership, it is not because the schools have prepared him for it.

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[1] See Harry H. Moore, "The High School Boy and Modern Social Problems," *Educational Review*, LIV (October, 1917), 256–65.

III

While human intelligence has not kept pace with the rapidly growing complexity of social and economic life, it has applied itself to mechanical invention with marvelous success. Civilization abounds with contrivances which one hundred years ago would have astounded even the most imaginative scientist. The steam engine, the telegraph, the automobile have almost ceased to interest us as inventions; wireless telegraphy and the aeroplane are rapidly becoming commonplaces.

Before the world-war, men used relatively crude devices for killing other human beings—first the thrown stone, then the javelin and the arrow, later the simple bullet and solid ball. Now, chemistry and electricity have revolutionized warfare. The Great War attracted the highest inventive genius. During its first five months the British Admiralty received six thousand offers of new scientific devices. During the last days of the war an American chemist, temporarily in the service of the United States government, invented a poison having many times the killing power of the most deadly gas previously used, and a large quantity of it was manufactured. A pilotless aeroplane was also devised which could be guided by radiograph. Thus, aeroplanes loaded with this gas might steal close to the enemy's lines and release a sufficient quantity to annihilate whole divisions of the opposing forces.

Recently an inventor brought to Washington devices which he claimed would make the United States the paramount military power of the world. "I have a device," he asserted, "with which I could wreck New York City in five minutes, sending its tallest towers toppling into the Hudson and leaving its busy streets a trackless mass of débris." However exaggerated these claims may be, they show the direction in which one man has applied his inventive genius.

In the development of wireless telegraphy, the atomic energies of matter were utilized mechanically for the first time. But wireless telegraphy has only tapped the power inherent in the atom. Researches are being continuously carried on. If means are devised, says Sir Oliver Lodge, to utilize fully the atomic energy in an ounce of matter, sufficient force would thus be made available to raise the German ships sunk at Scapa Flow and pile them high on the top of the Scottish mountains. He hastens to add, however, that he hopes the human race will not discover how to use this energy until it has the brains and moral vision to use it properly.

IV

If society is to prevent the slow starvation of its poor, if devastating epidemics of disease are to be avoided, if our criminal population is to be reduced, if the reproduction of feeble-minded is to be controlled, if a sudden political-economic revolution is to be averted, if we are to be saved from an international cataclysm which discerning historians prophesy would destroy European civilization, the inventive genius of man must be applied in the field of the social sciences.

Problems essentially political have become infinitely more complex since the days of Franklin and Jefferson. They must now be dealt with as economic, sociological, and psychological problems. The tariff, the income tax, the inheritance tax, the control of corporations, the banking system, the ownership of public utilities, hours of labor, wages, and unemployment are largely economic questions; only those persons can deal understandingly with them who have studied the science of economics. And economics is a subject which cannot be mastered by casual reading.

Disease, ignorance, congestion of population, juvenile delinquency, and crime are a few of the pressing problems which are sociological in their nature. No state legislator, no mayor, no congressman, no department head in Washington, who is not thoroughly grounded in sociology should expect to make much progress in remedying these specific evils. A comprehension of sociology cannot be acquired by a cursory reading of a few popular volumes; an extensive background of training is necessary, including a knowledge of biology and anthropology.

Furthermore, an understanding of many political, economic, and sociological problems depends upon a knowledge of psychology, because, as we now know, human behavior in various situations giving rise to these problems depends largely upon the emotional and instinctive make-up of the individuals involved. A governor of a state is not likely to deal wisely with a mob of I.W.W.'s unless he understands the impulses which are so important in determining their behavior. A judge or a prosecuting attorney cannot give intelligent help to the criminal unless he understands the relation of the instincts to antisocial conduct. A corporation president will never be able to deal adequately with a strike until, through psychology, he comes to an understanding of the human impulses which play a part of first importance in the problems of modern industry.

Finally, the prevention of war requires among political leaders a fuller knowledge of social and economic history. They must understand the part that war has played in the evolution of the race, the influence that science has had upon warfare, and the ways in which suspicions, fears, and hatreds have brought about antagonisms among nations. History is necessary to give the political scientist a sense of common destiny for mankind and a vision of the human progress possible in a world freed from the crushing costs of war.

Only through the study of government, economics, sociology, psychology, and socialized history, then, can there be developed that intelligence which will deal effectively with the present unparalleled situation. The making of a social scientist, no less than the making of a chemist or an electrical engineer, requires patient and intensive application to an extensive and rapidly growing body of subject-matter. Many of the problems before us now obviously cannot be solved by existing political expedients. They require the patient development of new methods; and it is inventive genius which must devise these new methods.

V

How may the inventive genius of man be directed to the solution of our social problems?

Some measures may be utilized to assist the present generation of lawmakers and executives. The publication in widely read magazines of articles in the fields of sociology and economics, and the increasing use of books on these subjects will help in the development of social knowledge and judgment. The rapid growth of university-extension courses, and technical institutes is evidence that progress is being made toward sound scientific thinking. It is a matter of common observation, however, that mayors of cities, governors of states, and members of state legislaures are not spending much of their time in studying sociology and economics. By many of them the best literature in these fields is considered dangerous, for they have the conservatism of mature years and the prejudices of a past generation.

Neither can we depend chiefly upon the teaching of social science in our universities and colleges. It is true that in such institutions are to be found some of the best teachers, and it is here that a large part of social research, essential to scientific approach, must be conducted. But in our colleges there are not enough students to insure the wise solution of our social problems twenty years hence. There are in the institutions of higher learning of the United States only a few more students than there are feeble-minded persons in the country. We must develop understanding and social spirit among a larger number of persons. The best place to reach this larger group with the necessary education is within the high schools. The genius which gives society an intricate electrical device and a destructive poison gas is inherent in adolescents; and it is here that this genius may well be directed toward our social problems.

In the present crisis the high schools have a remarkable opportunity to develop social intelligence. Their graduates in large degree create the public opinion by which federal, state, and local governments will be controlled in the future. The two million boys and girls in our high schools today constitute the largest and most impressionable group in which intelligence and social spirit may be successfully developed.

The students of our secondary schools have both the intellectual capacity and the emotional attitude which make this opportunity unique. When there is occasion to acquire social facts, high-school students give evidence of a wide range of interest and a well-developed capacity for comprehension. The work of certain modern psychologists shows that reasoning power is almost as highly developed at sixteen and seventeen as at a much later age. There is, of course, a great increase in mental content when one reaches maturity; social facts will suggest more associations to older persons. But the ability to comprehend complex problems and to reason seems to be as great at seventeen as at fifty. The experiences of high-school teachers support this view. Students who are able to grasp the intricate and abstract problems of higher algebra, chemistry, and physics, can deal with at least the elementary subject-matter of sociology and economics. Many of them, of course, are not endowed with the capacities necessary in positions of large responsibility; but through the teaching of social sciences to high-school students the general level of social intelligence may be raised, young people may be led to specialize in these subjects in college, and the development of skilled social scientists would be encouraged. In addition, the general training of the larger group would result in a demand for trained specialists in positions of leadership and responsibility.

High-school students not only have the necessary mental capacity, but also reveal considerable concern in such social problems as they are able to observe. A high-school boy of eighteen was stirred by the ravages of the influenza epidemic of 1918–19. "Thousands of people were dying," he writes. "What hurt me most of all was the death of the small children. . . . . I resolved, if possible, to help check this disease. I distributed circulars to many hundreds of people, and in this way they became acquainted with the cause and treatment of the 'flu.' " Debating made one girl ambitious to help the people of the slums. "In order to prove my points," she writes, "I went to work in a factory during my Christmas holidays. That one week turned my soul." A careful statistical study has shown that most high-school students have altruistic ambitions. They also uphold their professions in conduct. A girl sold over seven thousand dollars worth of Liberty Bonds; worked as a stenographer for Liberty Loan headquarters without pay; collected materials five hours a day for ten days for the Salvation Army; worked in a public library receiving books for soldiers; and made sweaters, socks, and wristlets. A boy made tables and equipped a building with shelves and cupboards for the

Red Cross, sold war savings stamps, and worked on a farm all summer for six and one-half dollars a week. During the war, thousands of high-school students entered into various forms of patriotic work for little or no financial compensation.

Of course, the altruistic ambitions of high-school students are naïve and in most cases are soon abandoned. But is this surprising? Not when we find that only an exceedingly small percentage of students who report such interests say that they were developed in the high school. And it appears that when social ambitions arise independently of the high school the school does not even become aware of them.[1]

VI

During recent years courses in sociology and economics have been introduced into the curricula of a few progressive schools. Of 5,054 high schools from which the United States Bureau of Education received information for the year 1918–19, 36 per cent were teaching economics and 5 per cent were offering some course which could properly be called "sociology." Unfortunately, however, many of the schools reporting economics still use the old, unsocialized course which deals with economic theory—value, price, rent, money, banking, and such topics—to the exclusion of such modern aspects of the subject as wages, strikes, and the cost of living.

The comments of high-school students who have studied sociology are illuminating.[2] "I think I have gained more useful information in this term's work," writes one student, "than in any other term of any subject during my four years in high school." Says another youth, "If the average adult knows as little about these problems as I did, I don't think it is surprising that the conditions do not get better any more quickly than they do."

Numerous comments indicate that boys and girls have been aroused from complacency. "Sociology has surely changed my outlook on life," writes a girl. "I have never had a subject so upset my ideas concerning conditions." Experience has shown, however, that sociology may "upset" the ideas of students without destroying their ideals. One student states that the course did not change his ideals, but made him see them more clearly. "I used to think that I would be content to live a quiet, happy life, making money and enjoying it," writes another, "but I feel now that such a life would be an empty one if I ignored the responsibility of aiding in the great war of humanity."

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[1] See Harry H. Moore, "The Altruistic Impulse of Older High School Students," *Educational Review*, LIX (April, 1920), 271–95.

[2] See Harry H. Moore, "A High School Course in Sociology," *Educational Review* , LVII (March, 1919) 181–93.

It is during the high-school years that boys and girls become social beings. At this period they have not become hardened by disillusionment and disappointed hopes; they have not become blasé. They have vigorous imaginations; risk and adventure appeal to them; they plan careers of high achievement. It is just at this time that boys and girls are eager for the truth concerning society, and it is at this time that they are ready to determine to give themselves to a noble cause, to serve mankind, to sacrifice life itself, if necessary, for the sake of others.

Organized education has hardly tapped the intellectual and spiritual energies of youth. These young people have ambitions which are infinitely precious. To a large degree our ability to meet successfully the baffling social problems of our present civilization rests upon our utilization of these energies and ambitions. The future depends largely upon our young people. If they are given an opportunity to prepare themselves, not only will they play their part courageously, but they will bring a high degree of genius to the solution of the most intricate problems humanity has ever been called on to face.